

Appl. No.: 09/484,331  
Amdt. Dated: July 10, 2003  
Reply to Office Action of: January 13, 2003

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Please cancel claims 63-67 without prejudice or disclaimer.

Claims 1-61 (cancelled).

Claim 62 (currently amended)      A method for drug discovery comprising:

(a)    integrating a vector comprising a transcriptional regulatory sequence into the genome of one or more eukaryotic cells, wherein said vector integration activates expression of an endogenous gene, by means of said transcriptional regulatory sequence, in said one or more cells;

(b)    culturing said one or more cells under conditions favoring expression of said activated gene, thereby producing a gene product of said activated gene;

(c)    screening said one or more cells from step (b) for a cell in which a desired gene is activated or for a cell in which a desired phenotype is induced by said activated gene;

(d)    treating said cell, in which said desired gene is activated or in which said desired phenotype is induced, with one or more test compounds ~~to be screened for drug activity~~;  
and

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(e) determining the ability of said one or more test compounds to interact with a product of said desired activated gene.

Claim 63 (currently canceled): A method for drug discovery comprising:

(a) integrating a vector into the genome of one or more eukaryotic cells, wherein said vector integration activates expression of an endogenous gene in said one or more cells;

(b) culturing said one or more cells in reduced-serum cell culture medium under conditions favoring production of a protein encoded by said activated gene and secretion of said protein into the cell culture medium;

(c) screening said one or more cells for a cell in which a desired gene is activated and the protein encoded by said desired gene is secreted into the cell culture medium; and

(d) screening one or more test compounds for drug activity by determining the ability of said test compounds to interact with said secreted protein in said cell culture medium.

Clam 64 (currently canceled): The method of claim 63, further comprising concentrating said cell culture medium prior to said screening in (d).

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Claim 65 (currently canceled): The method of claim 63, further comprising isolating said protein prior to said screening in (d).

Claim 66 (currently canceled): The method of claim 62 wherein said vector comprises a transcriptional regulatory sequence and wherein expression of said endogenous gene is activated by means of said transcriptional regulatory sequence.

Claim 67 (currently canceled): The method of claim 63 wherein said vector comprises a transcriptional regulatory sequence and wherein expression of said endogenous gene is activated by means of said transcriptional regulatory sequence.

Claim 68 (currently amended): The method of claim 62 ~~any of claims 62-67~~ wherein said vector integrates into the genome by non-homologous recombination.

Claim 69 (previously added): A method for drug discovery comprising:

(a) integrating a vector, comprising a promoter, into the genome of one or more eukaryotic cells, by non-homologous recombination, wherein said promoter activates expression of an endogenous gene in said one or more cells;

(b) culturing said one or more cells under conditions favoring expression of said activated gene, thereby producing a gene product of said activated gene;

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(c) screening said one or more cells for a cell in which a desired gene is activated or for a cell in which a desired phenotype is induced by said activated gene;

(d) treating said cell, in which said desired gene is activated or in which said desired phenotype is induced, with one or more test compounds to be screened for drug activity; and

(e) determining the ability of said one or more test compounds to interact with a product of said desired activated gene or to affect said desired phenotype.

Claim 70 (currently added) The method of claim 62 or claim 69 wherein the gene product is protein, the protein is purified from the cell and the test compound is exposed to the purified protein.